



Mathematics

Primary 5

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Outline of Sharing

School Values: Kindness, Integrity, Resilience, Responsibility, Creativity

- MOE Primary Mathematics curriculum and key focus areas
- P5 Syllabus and Topics
- Math Lessons in Cedar Primary
- End of Year Assessment Format
- Supporting your child in learning Math

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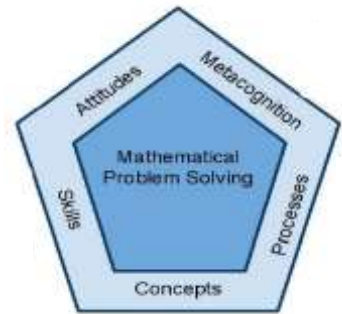


Primary Mathematics Curriculum

School Values: Kindness, Integrity, Resilience, Responsibility, Creativity

Primary education is a stage where students:

- acquire **basic numeracy**
- develop **logical reasoning and problem-solving skills**
- are equipped with a tool for **everyday life**
- build their **confidence** and **interest** in the subject which will shape their **attitude** towards the subject



Mathematics curriculum framework

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Key Focus Areas of the Syllabus

School Values: Kindness, Integrity, Resilience, Responsibility, Creativity

1. Develop critical mathematical processes that support the development of **21st century competencies**.
2. Develop **metacognition** to promote self-directed learning and reflection.

MOE Primary Mathematics 2013 syllabus
https://www.moe.gov.sg/-/media/files/primary/mathematics_syllabus_primary_1_to_6.aspx

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Emerging 21st Century Competencies

School Values: Kindness, Integrity, Resilience, Responsibility, Creativity

- ✓ Solve word problems
- ✓ Make decisions
- ✓ Justify claims
- ✓ Derive different strategies



- ✓ Solve real-life problems such as savings, GST, postage rates

- ✓ Discuss / Share how to solve the problem
- ✓ Collaborate with one another
- ✓ Use Math vocabulary

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Metacognition

School Values: Kindness, Integrity, Resilience, Responsibility, Creativity

- ✓ Thinking about thinking
- ✓ Think about **why** a chosen approach is used to solve a problem
- ✓ Make **thinking audible or visible** by communicating what is being thought or how the problem is approached



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Topics in the P5 Standard Math Syllabus

P5 Math Topics
Numbers up to 10 million
Fraction and Division
Mixed Fractions
Decimals
Percentage
Ratio
Rate

P5 Math Topics
Area of Triangle
Volume of Cube and Cuboid
Angles
Triangles
Parallelogram, Rhombus and Trapezium
Average of a Set of Data

Source : https://www.moe.gov.sg/-/media/files/primary/mathematics_syllabus_primary_1_to_6.ashx

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Mathematics Syllabus



Spiral Curriculum

Topics in the P5 Foundation Math Syllabus

P5 Foundation Math Topics
Numbers up to 10 million
Factors and Multiples
Fractions
Mixed Numbers
Decimals
Rate and Speed
Time

P5 Foundation Math Topics
Area and Perimeter
Volume of Cube and Cuboid
Perpendicular and Parallel Lines
Angles
Rectangle and Square
Tables, Bar Graphs and Line Graphs

Mathematics Syllabus

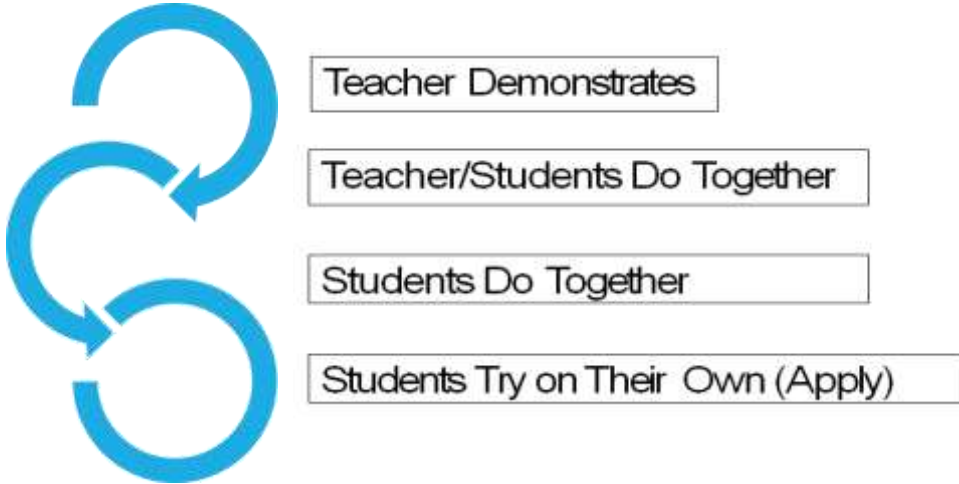


Spiral Curriculum

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Math Lessons in Cedar

Gradual Release of Responsibility



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4 Steps to Problem Solving

S

STUDY the problem

- Read the problem and underline the key information
- What do I know? What do I need to find?
Can I retell the problem in my own words?

O

ORGANISE details and think of a plan

- Look at the information given and come up with a plan
- How would I solve this problem? Which heuristic can I use? Have I come across a similar problem before?

A

ACT out the plan

- Solve the problem by carrying out the plan
- Are my equations clearly and systematically written? Is there another way to solve the problem if my plan does not work?

R

REFLECT on your solution

- Check my work
- Does my answer make sense? Is my answer reasonable? Are the correct units written? Is there an alternative method?

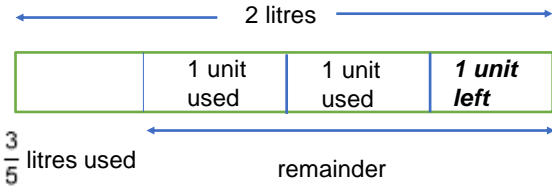
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Method 1

4 Steps to Problem Solving

Mdm Ong bought 2 litres of washing liquid and used $\frac{3}{5}$ litres in the first week.

Then she used $\frac{2}{3}$ of the remainder in the second week. How much of the washing liquid was left?



$$2 - \frac{3}{5} = \frac{7}{5} \text{ litres (remainder)}$$

$$\frac{1}{3} \times \frac{7}{5} = \frac{7}{15} \text{ litres (Ans)}$$

S

STUDY the problem
 - Read the problem and highlight the key information.
 - What do I know? What do I need to find out?
 - Can I recall the problem in my own words?

O

ORGANISE details and think of a plan
 - Look at the information given and come up with a plan.
 - How would I solve this problem? What facts do I use?
 - Has I seen or done a similar problem before?

A

ACT out the plan
 - Solve the problem by carrying out the plan.
 - Are my equations and their solutions correct? Do I have another way to solve the problem if my plan does not work?

R

RECHECK on your solution
 - Check my work.
 - Does my answer make sense? Is my answer reasonable?
 - Are the correct units given? Is there an alternative method?

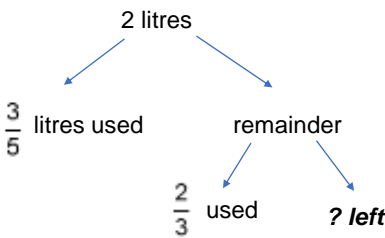
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Method 2

4 Steps to Problem Solving

Mdm Ong bought 2 litres of washing liquid and used $\frac{3}{5}$ litres in the first week.

Then she used $\frac{2}{3}$ of the remainder in the second week. How much of the washing liquid was left?



$$2 - \frac{3}{5} = \frac{7}{5} \text{ litres (remainder)}$$

$$\frac{1}{3} \times \frac{7}{5} = \frac{7}{15} \text{ litres (Ans)}$$

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STUDY the problem
 - Read the problem and highlight the key information.
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ORGANISE details and think of a plan
 - Look at the information given and come up with a plan.
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RECHECK on your solution
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Skills & Concepts – Use of Math Notebook

School Values: Kindness, Integrity, Resilience, Responsibility, Creativity

Change Qns 22 Jun 2024

① Total unchanged

Box A: 20, Box B: 10, Total: 30
 A-5, B+5
 Total: 30

Bot: 20, Aft: 15
 10, 30
 15, 30

② One Quantity unchanged

Box A: 20, Box B: 10, Total: 30
 A-5, B same
 Total: 30

Bot: 20, Aft: 15
 10, 10

③ Difference unchanged (eg. age)

Box A: 20, Box B: 10, Diff: 10
 A-5, B-5
 Diff: 10

20, 10
 -5, -5
 15, 5

Fractions

① Same denominator *Like Fractions*

$$\frac{2}{5} \quad \frac{3}{5}$$

② different denominators *unlike fractions*

$$\frac{3}{8} \quad \frac{2}{10}$$

③ $\frac{15}{6}$ *(more than 1 whole)*

④ $2\frac{7}{8}$ *(mixed number)*

⑤ $\frac{2}{5} = \frac{4}{10}$ *equivalent fraction*

⑥ $\frac{1}{6}$ of 8. *fraction of a set*

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Skills & Concepts – Use of Math Notebook

School Values: Kindness, Integrity, Resilience, Responsibility, Creativity

Fraction and Division

$3 \div 4 = \frac{3}{4}$

$2 \div 3 = \frac{2}{3}$

$4 \div 6 = \frac{4}{6} = \frac{2}{3}$

$7 \div 8 = \frac{7}{8}$
 $4 \div 5 = \frac{4}{5}$ *divide line*

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Skills & Concepts – Use of Math Notebook

School Values: Kindness, Integrity, Resilience, Responsibility, Creativity

26 February 2024

(19) Alvin had $\frac{1}{3}$ of a bar of chocolate. He ate $\frac{1}{2}$ of it.
What fraction of the bar of chocolate did he eat?

$$\frac{1}{3} \times \frac{1}{2} = \frac{1}{3} \times \frac{1}{2}$$

$$= \frac{1 \times 1}{3 \times 2}$$

$$= \frac{1}{6}$$

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End of Year Examination - Format

Primary 5 Standard Math	Paper 1 (45%) without use of a calculator Booklet A – 15 Multiple Choice Questions (20%) Booklet B – 15 Short Answer Questions (25%)
	Paper 2 (55%) with use of a calculator 5 Short Answer Questions (10%) 12 Long Answer Questions (45%)

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End of Year Examination - Format

Primary 5 Foundation Math	Paper 1 (50 marks) <i>without use of a calculator</i> Booklet A – 20 Multiple Choice Questions (30) Booklet B – 10 Short Answer Questions (20)
	Paper 2 (40 marks) <i>with use of a calculator</i> 10 Short Answer Questions (20) 6 Long Answer Questions (20)

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Supporting Your Child in Learning

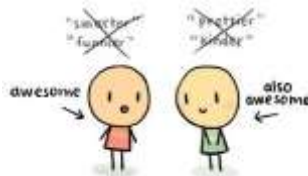
Attendance

Active Participation

Attitude

Focus. Self-Discipline. Effort Determines Success

Achievement



- * **Create routines**
- * **Communicate & Encourage**
- * **Celebrate improvement**



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Supporting Your Child in Learning Math

School Values: Kindness, Integrity, Resilience, Responsibility, Creativity

Do you think practice makes perfect?

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Practice makes Perfect?

Practice makes permanence.



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'Unity' by Cleo V. Swarat

I dreamed I stood in a studio
 And watched two sculptors there,
 The clay they used was a young child's mind
 And they fashioned it with care.
 One was a teacher:
 the tools she used were books and music and art;
 One was a parent
 With a guiding hand and gentle loving heart.
 And when at last their work was done,
 They were proud of what they had wrought.
 For the things they had worked into the child
 Could never be sold or bought!
 And each agreed she would have failed
 if she had worked alone.
*For behind the parent stood the school,
 and behind the teacher stood the home!*

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MOTHER TONGUE LANGUAGES

Primary 5

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PURPOSE & GOALS OF MTL LEARNING

School Values: Kindness, Integrity, Resilience, Responsibility, Creativity

- To support and enable every student to learn MTL to as high a level as each student is able to.
 - **Communication** – valuable 21st century competency for life and at work. Willingness and Confidence in using MTL for effective communication.
 - **Culture** – understand and develop unique identity through deeper appreciation of culture, traditions, literature and history. Critical base in preserving transmission of cultural values and traditions.
 - **Connection** – to connect with communities across Asia and the people who speak that language and share that culture. Enhances cross-cultural competency.

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PURPOSE & GOALS OF MTL LEARNING

School Values: Kindness, Integrity, Resilience, Responsibility, Creativity

Learning MTL develops 21st Century Competencies (21CC)

Equip students with values, socio-emotional competencies, and 21CC, esp.

- **Communication skills** (using authentic tasks, context to practice language skills. E.g. writing emails, interviewing peers)
- **Cross-cultural literacy** (using authentic context to appreciate cultural background and identity. E.g. food, traditions of different cultures)
- **Critical, adaptive and inventive thinking** (using authentic tasks, context to trigger thinking and discussion. E.g. Role-play)

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PURPOSE & GOALS OF MTL LEARNING

School Values: Kindness, Integrity, Resilience, Responsibility, Creativity

Authentic and vibrant environment for active use of MTL

Help students to like, learn and use their MTL as a living language, and produce proficient users who can communicate effectively in a variety of real-life settings.

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P5 STANDARD MOTHER TONGUE

School Values: Kindness, Integrity, Resilience, Responsibility, Creativity

- Paper 1: Composition Writing (40 marks, 20%)
 - Duration: 50 min
 - Choose to do either 1 – Topical composition OR Picture composition
 - SEAB-approved dictionaries may be used during exam
- Paper 2: Language Use and Comprehension (90 marks, 45%)
 - Duration – 1 h 40 min
 - Dictionaries are not allowed during exam
- Paper 3: Listening Comprehension (20 marks, 10%)
- Paper 4: Oral (50 marks, 25%)
 - Read Aloud and Video Conversation

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P5 HIGHER MOTHER TONGUE

School Values: Kindness, Integrity, Resilience, Responsibility, Creativity

- Paper 1: Composition Writing (40 marks, 40%)
 - Duration: 50min
 - Choose to do either 1 – Topical composition OR Continuous Writing
 - SEAB-approved dictionaries may be used during exam
- Paper 2: Language Use and Comprehension (60 marks, 60%)
 - Duration: 1 h 20 min
- Grading
 - Distinction: 80 – 100 marks
 - Merit: 65 – 79 marks
 - Pass: 50 – 64 marks
 - Ungraded – below 50 marks

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P5 HIGHER MOTHER TONGUE

School Values: Kindness, Integrity, Resilience, Responsibility, Creativity

- Current P5 higher MT students who fail to meet either of the requirements below, **will NOT be** offered Higher Mother Tongue at P6 next year:
 - Achieve at least AL4 for standard MT at P5 End-Year Examination
 - Achieve at least 60 marks for higher MT at P5 End-Year Examination

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P5 FOUNDATION MOTHER TONGUE

School Values: Kindness, Integrity, Resilience, Responsibility, Creativity

- Paper 1: Language Use and Comprehension (15 marks, 15%)
 - Duration – 40 min
 - Dictionaries are not allowed during exam
- Paper 2: Oral (55 marks, 55%)
 - Reading Aloud and Video Conversation
- Paper 3: Listening Comprehension (30 marks, 30%)

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Partnering Parent/Guardian to Support the Child/Ward

School Values: Kindness, Integrity, Resilience, Responsibility, Creativity

Partnering You

- We will:
 - Inform you of your child's/ward's progress regularly
 - Provide ideas and suggestions to support your child's/ward's learning, where necessary
 - Share strategies to engage your child/ward in MTL learning at home in a fun and meaningful manner.

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Partnering Parent/Guardian to Support the Child/Ward

School Values: Kindness, Integrity, Resilience, Responsibility, Creativity

Do	Avoid
<ul style="list-style-type: none"> • Believe that your child can learn and wants to learn • Encourage your child to learn MTL • Praise your child for his/her good effort and progress • Set incremental and achievable goals with your child • Communicate with the school teacher regularly on your child's progress at home 	<ul style="list-style-type: none"> • Making comparison between your child and other children's achievement • Doing school work for your child • Giving impression that MTL is not important

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Partnering Parent/Guardian to Support the Child/Ward

School Values: Kindness, Integrity, Resilience, Responsibility, Creativity

Partnering You

- Speak to your child in MTL whenever possible
- Show interest in your child's MTL learning journey
- Learn with your child, learn from your child
- Have regular conversations with your child about his/her experience in class
- Use a variety of resources, e.g. physical and digital resources to extend your child's language and literacy skills in MTL
- Encourage and accompany your child to read books or watch suitable TV programmes in MTL
- Provide a print-rich environment – visit the library regularly, set up a reading corner at home

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Science

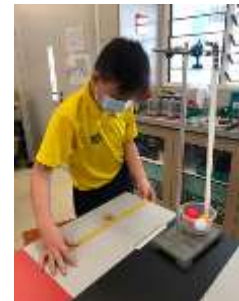
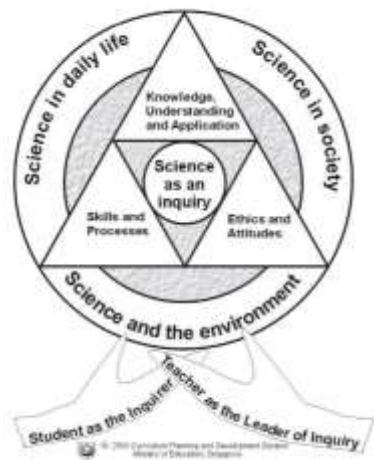
Primary 5

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Science Curriculum Framework

School Values: Kindness, Integrity, Resilience, Responsibility, Creativity



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Topics covered for P5 Science (Standard)

School Values: Kindness, Integrity, Resilience, Responsibility, Creativity

Theme	Topics
System	Plant Transport System Air & Respiratory System The Circulatory System Electrical System Using Electricity The Unit of Life
Cycles	Reproduction in Plants Reproduction in Humans Water & Changes of State The Water Cycle

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Topics covered for P5 Science (Foundation)

School Values: Kindness, Integrity, Resilience, Responsibility, Creativity

Theme	Topics
System	Plant Transport System Air & Respiratory System The Circulatory System Electrical System Using Electricity
Cycles	Reproduction in Plants Reproduction in Humans Water & Changes of State The Water Cycle

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Examination Format - Standard

School Values: Kindness, Integrity, Resilience, Responsibility, Creativity

The examination consists of one written paper comprising two booklets, Booklet A and Booklet B.

Booklet	Item type	Number of questions	Number of marks per question	Marks
A	Multiple-choice	28	2	56
B	Open-ended	12 - 13	2-5	44

- Booklet A consists of 28 multiple-choice questions with four options. Each multiple-choice question carries 2 marks.
 - Booklet B consists of 12-13 open-ended questions. Each open-ended question carries 2, 3, 4 or 5 marks.
- Candidates are required to answer all the questions in the two booklets.
 - The duration of the paper is 1 hour 45 minutes.

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Examination Format - Foundation

School Values: Kindness, Integrity, Resilience, Responsibility, Creativity

The examination consists of one written paper comprising two booklets, Booklet A and Booklet B.

Booklet	Item type	Number of questions	Number of marks per question	Marks
A	Multiple-choice	18	2	36
B	Structured	6 – 7	2 – 3	14
	Open-ended	5 – 6	2 – 4	20

- Booklet A consists of 18 multiple-choice questions with three options. Each multiple-choice question carries 2 marks.
 - Booklet B consists of two parts.
 - First part consists of 6 – 7 structured questions e.g. 'Fill in the blanks', 'matching', etc
 - Second part consists of 5 – 6 open-ended questions
- Candidates are required to answer all the questions in the two booklets.
 - The duration of the paper is 1 hour 15 minutes.

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Answering Open-Ended Questions

School Values: Kindness, Integrity, Resilience, Responsibility, Creativity

- Read and identify the key information given in the question
- Identify the topic that is tested
- What is the concept assessed under the topic
- Link their concept to the context given in the question.

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Example

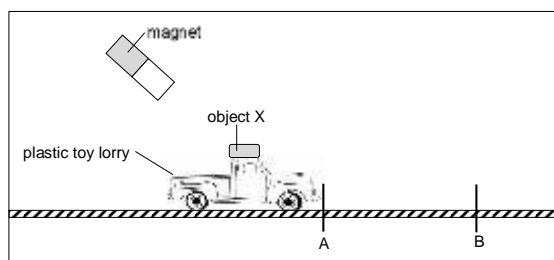
School Values: Kindness, Integrity, Resilience, Responsibility, Creativity

Wei Jie placed an object X on top of the plastic toy lorry as shown.

When he brought a magnet near the toy car, the plastic toy lorry began to move from position A to B.

Why did the plastic toy lorry move away when the magnet was brought near it?

Like poles of the magnets repel each other causing the lorry to move away.
(Incomplete Response)



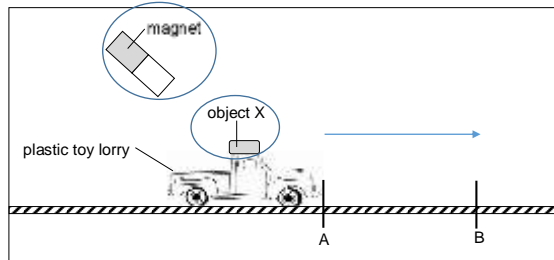
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Example

School Values: Kindness, Integrity, Resilience, Responsibility, Creativity

Wei Jie placed an object X on top of the plastic toy lorry as shown. When he brought a magnet near the toy car, the plastic toy lorry began to move from position A to B.



Why did the plastic toy lorry move away when the magnet was brought near it?

Object X is a magnet, and the like poles of the magnets repel each other causing the lorry to move away.

Topic: Magnet

Concept: Like poles of two magnets repel each other

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Parents as Partners

School Values: Kindness, Integrity, Resilience, Responsibility, Creativity

- Supporting the child's progress
- Sustain curiosity and interest in the subject



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Thank You

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Supporting your child

School Values: Kindness, Integrity, Resilience, Responsibility, Creativity



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